

Relevant to claim No.

## A. CLASSIFICATIONOF SUBJECT MATTER

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Int.Cl' C22C33/04,33/02,38/00,C21D6/00,B22F1/00,9/04,H01L41/20,F25B21/00 B22D11/00,11/06,11/106,11/124,13/10

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Category\*

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl' C22C33/04,33/02,38/00,C21D6/00,B22F1/00,9/04,H01L41/20,F25B21/00 B22D11/00,11/06,11/106,11/124,13/10

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Japanese Utility Model Gazette 1926-1996, Japanese Publication of Unexamined Utility Model Applications 1971-2004, Japanese Registered Utility Model Gazette 1994-2004, Japanese Gazette Containing the Utility Model 1996-2004

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Citation of document, with indication, where appropriate, of the relevant passages

## X JP 2000-54086 A(KAZUAKI FUKAMICHI)2000.02.22 10,11 claim1-9, example (Family:none) X JP 2002-356748 A(K.K. TOSHIBA)2002.12.13 10,12 claim1-8, example 1(Family:none) X JP 2003-96547 A(K.K. TOSHIBA)2003.04.03 10,12,13,15 claim1-7, example (Family:none) ,16 A JP 2002-69596 A(KAZUAKI FUKAMICHI)2002.03.08 21 claim1-9, example (Family:none) Further documents are listed in the continuation of Box C. See patent family annex. Special categories of cited documents: later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the inter- "X" national filing date document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) inventive step when the document is taken alone document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art document referring to an oral disclosure, use, exhibition or other document published prior to the international filing date but later "&" document member of the same patent family than the priority date claimed Date of the actual completion of the international search Date of mailing of the international search report 10, 2, 2004 26.01.2004 Name and mailing address of the ISA/JP Authorized officer 9269

TAKESHI INOUE

Telephone No. +81-3-3581-1101 Ext. 3435

Japan Patent Office

3-4-3, Kasumigaseki, Chiyoda-ku, Tokyo 100-8915, Japan